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## STORED-PRODUCT INSECT INVESTIGATIONS

E. A. Back, in Charge

Gilbert A. Schenk, of the field laboratory at Manhattan, Kans., studying insect control in flour mills, spent a portion of December in Washington for consultation and reference work. After leaving Washington December 14, on his return trip, Mr. Schenk made stops at Harrisburg, St. Louis, and Kansas City.

Dr. E. A. Back attended the meetings of the Insecticide and Disinfectant Manufacturers Association, held at Hotel McAlpin, New York City, December 10 to 13, and on December 12 showed a series of lantern slides depicting injury caused by the clothes moth, and methods of control. Doctors Roark and Redman, of the Bureau of Chemistry and Soils, also attended the meetings.

A meeting of representatives of Stanislaus, Merced, and San Joaquin Counties, Calif., was held at Modesto December 12 to review work already done along the lines of control of the bean weevil, and to make plans for more extensive cooperation among bean growers in this portion of California. A. O. Larson and C. K. Fisher, of the field laboratory at Alhambra, Calif., were among the speakers, and E. T. Hamlin, Horticultural Commissioner of Stanislaus County, presided. Among others present were horticultural commissioners from Merced and San Joaquin Counties, horticultural inspectors from Mountain View, Patterson, Waterford, Oakdale, Turlock, Delhi, Manteca, and Lodi, a bee inspector from the Horticultural Department, a representative from the Turlock Chamber of Commerce, one from the Stanislaus County Board of Supervisors, who also was a member of the bean committee of the Stanislaus County Farm Bureau, one from the Agricultural Extension Service at Modesto, and representatives from two warehouse companies and a Grange company at Modesto, from more or less similar concerns at Turlock, Merced, Hilmar, and Trinidad, and from five farm centers.

On December 20 A. O. Larson gave a talk on bean-weevil control at the Prescott, Calif., Farm Center.

## DECIDUOUS-FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, in Charge

On December 1 Dr. B. A. Porter, formerly in charge of the field laboratory at Vincennes, Ind., was transferred to Washington, D. C., where he will act as group leader of the codling-moth investigations. Doctor Porter will also assist Dr. Quaintance in administrative work in the Office of Deciduous-Fruit Insects.

The following employees of this division were in attendance at the annual meetings of the American Association of Economic Entomologists: A. L. Quaintance, F. L. Campbell, J. W. Bulger, R. F. Sazama, O. I. Snapp, F. H. Lathrop, N. E. McIndoo, B. A. Porter, H. H. Shepard, R. S. Filmer, A. J. Ackerman, Paul M. Gilmer, E. H. Siegler, and R. E. Snodgrass.

E. J. Newcomer and M. A. Yothers, of the field laboratory at Yakima, Wash., attended the meeting of the Washington State Horticultural Association at Wenatchee, December 3 to 5. Mr. Newcomer read a paper on "The Codling Moth Problem in the Pacific Northwest."

On December 13 Mr. Newcomer read a paper at the meeting of the Montana Horticultural Society at Missoula on "Pansy Spot," an injury to apples resulting from the oviposition of thrips, and also discussed control of the codling moth.

Dr. Lon A. Hawkins, of the Bureau of Plant Industry, visited the field laboratory at Yakima December 21.

### Contributions from the Japanese-Beetle Laboratory

On December 6 L. B. Smith presented a paper entitled "The Japanese Beetle, Latest Recommendations for Control" before the New Jersey State Horticultural Society, in session at Atlantic City.

On December 12 T. L. Guyton, of Harrisburg, Pa., visited the Japanese-Beetle Laboratory.

John Hadjinicolon, of Athens, Greece, visited the Laboratory on December 15, to observe methods used in parasite work.

A. F. Satterthwait, in charge of the Cereal and Forage field laboratory at Webster, Mo., called at the Laboratory December 15.

On December 22 Dr. H. L. Parker, Entomologist in charge of the field laboratory at Hyères, Var, France, for the study of the European corn borer, visited the Japanese Beetle Laboratory, and was particularly interested in the parasite project here.

On December 27 several members of the laboratory staff took part in the entomological meetings in New York City. Articles were presented by W. E. Fleming and F. E. Baker, H. W. Allen and R. W. Burrell, C. H. Ballou, H. C. Hallock, and E. A. Richmond.

## TAXONOMIC INVESTIGATIONS

Harold Morrison, In Charge

C. F. W. Muesebeck, of the Gipsy Moth Laboratory, Melrose Highlands, Mass., spent December 10 to 16 in Washington, studying material relating to his work on hymenopterous parasites. He also examined some genotypes of the family Braconidae.

A. F. Satterthwait, of the field laboratory at Webster Groves, Mo., came to Washington early in December to discuss some of his problems with the taxonomy specialists of the Bureau and to secure identifications of material.

Frank Haimbach, of the Philadelphia Academy of Natural Sciences, visited the Museum in December to study the collection of Pyralidae and other Lepidoptera.

Dr. Audrey Avinoff, Director of the Carnegie Museum at Pittsburgh, recently called at the Division of Insects to consult with Dr. Schaus and other Bureau lepidopterists.

Prof. Paul B. Lawson, of the University of Kansas, at Lawrence, stopped in Washington on his way to the meetings in New York City, to study Homoptera in the collection here.

Dr. C. J. Drake, of Iowa State College, Ames, spent parts of December 24 and 25 working in the National Collection of Heteroptera.

H. S. Barber, A. G. Böving, H. E. Ewing, and Harold Morrison, of the taxonomic unit, attended the recent meetings of the American Association for the Advancement of Science in New York City.

Prof. James S. Hine, of the Ohio State University, at Columbus, visited the Museum on December 26 and again on December 31, looking up matters relating to his studies on the dipterous family Tabanidae, and other problems.

Professors R. H. Beamer and H. B. Hungerford, of the University of Kansas, at Lawrence, spent December 31 in the Division of Insects consulting with the Bureau specialists and examining material in the collection of Heteroptera.

E. Rivnay, of Johns Hopkins University, Baltimore, Md., called at the Museum December 31 to examine specimens of the beetle family Rhipiphoridae, a revision of the North American species of which he has now virtually completed.

Frederick Muir called on some of the workers in the taxonomic unit on December 3 and 4.

## FOREST-INSECT INVESTIGATIONS

### F. C. Craighead, in Charge

J. M. Miller, in charge of the field laboratory at Palo Alto, Calif., accompanied by H. Basil Wales, Assistant District Forester, District 3, of the Forest Service, made an examination of the insect-control project at Prescott, Ariz., November 12 to 18. This project covers an area of 15,000 acres of yellow pine, in which the primary insect losses are due to Dendroctonus barberi Hopk., associated with several species of Ips. The first control work was carried out during the winter of 1927-28, and resulted in a 75 per cent decrease of losses during the following season of 1928. During the same period an increase of 300 per cent developed in adjoining areas where no control work was done. Maintenance control work on the Prescott area during the current winter was agreed upon by the Forest Service.

At the request of a commercial firm on the Pacific coast, which specializes in control of termites, J. M. Miller and Dr. H. E. Burke, of the field laboratory at Palo Alto, Calif., and Professor R. W. Doane, of Stanford University, spent the afternoon of November 5 viewing one of their control operations in Palo Alto. All the soil beneath the houses under treatment is impregnated with a patented gas, and all the woodwork sprayed with a patented paint. The work is apparently done thoroughly, and is guaranteed for six years.

On November 27 the annual conference of the workers attached to the field laboratory at Palo Alto was held, to review the work conducted during the field season of 1928 and to discuss plans for the work to be done in the coming winter. J. M. Miller, Dr. H. E. Burke, F. P. Keen, W. D. Edmonston, J. E. Patterson, and H. L. Person were present.

Albert Wagner and G. R. Struble made a trip to North Fork, Calif., December 5 to 8, to collect material containing overwintering stages of the western pine beetle, for use in laboratory tests this winter.

### Contributions from the Gipsy-Moth Laboratory

Visitors to the Gipsy-Moth Laboratory in December were, December 6, L. B. Scott, in charge of the field laboratory at Silver Creek, N. Y., December 7, Dr. H. L. Parker, in charge of the field laboratory at Hyères, Var., France, December 12, C. H. Hadley, Plant Quarantine and Control Administration, Riverton, N. J., and December 19, Dr. H. M. Tietz, Department of Zoology and Entomology, Pennsylvania State College.

C. W. Collins, T. H. Jones, R. T. Webber, Dr. M. T. Smulyan, D. F. Barnes and S. F. Potts, all members of the staff of the Gipsy-Moth Laboratory, attended the New York meetings of the American Association for the Advancement of Science, which were held December 27, 1928, to January 2, 1929. At the meetings of the American Association of Economic Entomologists, held in connection with the meetings named, two papers were presented, one by C. W. Collins and J. E. R. Holbrook, and the other by D. F. Barnes and S. F. Potts.

## TRUCK-CROP INSECT INVESTIGATIONS

J. E. Graf, in Charge

J. N. Tenhet, Chadbourn, N. C., visited Washington December 6 to 13, for consultation and to review literature on wireworms.

About the middle of December A. C. Morgan, Clarksville, Tenn., visited Tempe, Ariz., and other points in the Southwest, to confer with workers regarding investigations on the tobacco stalk borer, which has proven injurious to tobacco plantings in that section.

The following employees of this Division were in attendance at the annual meetings of the American Association of Economic Entomologists, held at New York City, December 27 to 31: Walter Carter, Twin Falls, Idaho, N. F. Howard, Rodney Cecil, and O. E. Gahm, Columbus, Ohio, J. E. Graf and C. H. Popenoe, Washington, D. C., D. E. Fink, Philadelphia, Pa., and W. E. Stone, Sanford, Fla.

Walter Carter, Rodney Cecil, and W. E. Stone stopped over at Washington for conference, on their return from the New York meetings.

On his return from the scientific meetings in New York City Prof. D. M. DeLong, of Ohio State University, Columbus, was a visitor at the Washington office, where he called to discuss the work he has been conducting on the bean leafhopper.

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## INSECTS AFFECTING MAN AND ANIMALS

F. C. Bishopp, in Charge

O. G. Babcock, of the field laboratory at Sonora, Tex., attended the International Livestock Show at Chicago, December 1 to 8, where he had charge of this Bureau's exhibit on cattle grubs. He also attended the meeting of the American Farm Bureau Federation at the Sherman Hotel, Chicago, December 10 to 12. At this meeting the Bureau of Entomology had an exhibit on mites and lice of poultry.

Dr. W. V. King, in charge of the field laboratory at Mound, La., sailed on the S. S. President Taft December 8 for Manila, where, during the next five months, he will make special studies of the Anopheline mosquitoes of the Philippine Islands. This work is to be done under the auspices of the International Health Board. Dr. King's headquarters while in the Philippines will be the Bureau of Science, Manila.

O. G. Babcock attended a meeting of ranchers at Del Rio, Tex., December 16, to which he had been invited for the purpose of discussing measures for controlling screw worms and blowflies.

## BEE CULTURE INVESTIGATIONS

Jas. I. Hambleton, in Charge

Jas. I. Hambleton and W. J. Nolan attended the recent meetings of the American Association for the Advancement of Science held in New York City. At the session of the Apicultural Section of the American Association of Economic Entomologists Mr. Hambleton presented a paper showing that American honey exporters would greatly benefit by increased confidence in their product abroad if the United States Standards for honey were generally adopted in this country. He also read a paper prepared by Dr. C. E. Burnside, dealing with the latter's experiments on the use of formaldehyde gas for the disinfection of combs infected with American foulbrood. Doctor Burnside maintains that the method offers good possibilities when proper precautions are used, and that the labor and cost of treating combs in this way should be less than they are with water-formalin and alcohol-formalin solutions. He holds, nevertheless, that chances of failure are considerably greater with formaldehyde gas than when either of these solutions is used. This difference holds especially in case of sealed cells of honey or brood, owing to the resistance offered by the cappings to penetration of the gas. Mr. Nolan gave a paper telling of the success obtained during the last two years at the Bee Culture Laboratory in using Watson's method for artificially inseminating queenbees.

Prof. L. M. Bertholf, of Western Maryland College, presented a paper before the Zoological Society at its recent meeting in New York, dealing with his results obtained at the Bee Culture Laboratory on chroma vision in the honeybee.

Recent visitors at the Bee Culture Laboratory included Chas. A. Reese, State Apiarist, Columbus, Ohio, Prof. L. M. Bertholf, of Western Maryland College, Westminster, Md., and W. E. Dunham, Instructor in Apiculture, Ohio State University, Columbus, Ohio.

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## COTTON INSECT INVESTIGATIONS

B. R. Coad, in Charge

B. R. Coad and Roy L. Mitchell left Tallulah December 4 to visit the International Aviation show at Chicago. From Chicago they went to Washington to attend conferences with Bureau and other Departmental officials, and returned to Tallulah December 15.

F. W. Simmons, field assistant in the field laboratory at Tallulah, resigned December 11.

F. F. Bondy, of the field laboratory at Florence, S. C., visited Washington December 12 and 13, to confer with officials of the Bureau. In the holiday week he attended the New York meetings of the American Association of Economic Entomologists.

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Rabaud, Étienne.
How animals find their way about, tr. by I. H. Myers. 142 p., illus. New York, Harcourt, Brace and Company, 1928. (References, p. 131-135.) (Orientation among flying insects, p. 7-43; Orientation in walking sticks, p. 44-94; Orientation in invertebrates, p. 95-102.)

Ramdohr, K. A., ed.
K. A. Ramdohr's Versuche über die einträglichste und einfachste Art der Bienenzucht, neu. hrsg. und beleuchtet von Ludwig Armbruster . . . 107 p., diagrs. Leipzig, Berlin [etc.], Fischer, 1921. (Added t.-p.: Bücherei für Bienenkunde, hrsg. von Ludwig Armbruster . . . bd. V.)

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